ILLINOIS COMMERCE COMMISSION

DOCKET NO. 11-0767

IAWC EXHIBIT 14.00SR

SURREBUTTAL TESTIMONY OF KERRY A. HEID

ILLINOIS-AMERICAN WATER COMPANY

MAY 8, 2012

TABLE OF CONTENTS

Page

SURREBUTTAL TESTIMONY
OF
KERRY A. HEID

I. WITNESS IDENTIFICATION AND OVERVIEW

Q1. Please state your name and business address.

A. My name is Kerry A. Heid. My business address is 3212 Brookfield Drive, Newburgh, IN 47630.

Q2. Are you the same Kerry A. Heid who previously submitted rebuttal testimony in this proceeding on behalf of Illinois-American Water Company ("Illinois-American," the "Company," or "IAWC")?

A. Yes.

Q3. What is the purpose of your surrebuttal testimony in this proceeding?

A. The purpose of my surrebuttal testimony is to respond to the rebuttal testimonies of Illinois Commerce Commission ("ICC") Staff witnesses Ms. Cheri Harden (ICC Staff Exhibit 13.0), Ms. Dianna Hathhorn (ICC Staff Exhibit 10.0), and Ms. Janis Freetly (ICC Staff Exhibit 14.0), and the Illinois Attorney General's ("AG") witness Mr. Scott C. Rubin (AG Exhibit 3.0), involving IAWC's proposed Revenue Adjustment Clause ("RAC"). To my knowledge, no other party presented rebuttal testimony to IAWC's proposed RAC.

Q4. Generally, what are these witnesses' positions on the RAC?

A. They recommend it be rejected, or if accepted, that certain changes be implemented.

Q5. Please discuss how your testimony is organized.

A. My testimony is organized into the following sections:

I. Witness Identification and Overview
II. Need for the Proposed RAC
III. Rider RAC Deferrals
IV. Effect of RAC on Cost Control Incentive
V. Requirement to Conduct a Periodic Audit
VI. Effect of RAC on Voluntary Conservation
VII. Fixed Versus Variable Costs and Marginal Cost Pricing

II. NEED FOR PROPOSED RAC (RESPONSE TO STAFF WITNESS MS. HARDEN AND AG WITNESS MR. RUBIN)

Q6. On page 1, line 21, through page 5, line 93, and page 7, lines 140-155, of her rebuttal testimony, Staff Witness Ms. Harden repeats the arguments from her direct testimony, stating that IAWC did not present any changing or unusual circumstances that would warrant adoption of the RAC in this proceeding. Please respond.

A. I disagree. The purpose of the RAC is to directly address the ever-increasing issue of volatility in sales volumes, the problems in [1] projecting pro forma water volumes for use in establishing water rates, and the effects on IAWC and customers if actual sales volumes do not ultimately match the projected pro forma sales volumes used to establish the rates. The variability in weather, declining customer usage patterns, and the changing number of customers can have a profound effect on a water utility's actual billed revenues and on customers' bills.

As I stated in my rebuttal testimony (IAWC Exhibit 14.00R, p. 8), IAWC Exhibit 4.00 explained, a number of "unusual circumstances," including declining usage per customer (as testified to by IAWC Witness Gary A. Naumick (IAWC Exhibit 8.00)), new and ever more stringent conservation standards for appliances mandated by the federal government, and volatility in number of customers make determining accurate projected pro forma water volumes for use in establishing water rates an increasingly complex and uncertain process. The RAC will effectively eliminate the contentiousness related to the process of determining the projected pro forma water volumes used in the establishment of the water rates, and will help ensure that IAWC would receive the authorized revenue, no more and no less, and customers would pay the correct amount of fixed cost contribution in their monthly bills.

Q7. Please summarize your response to Ms. Harden's concerns with respect to whether variable weather, declining usage patterns and changing number of customers present changing and unusual circumstances that would warrant adoption of the RAC in this proceeding.

A. These aforementioned factors make the accurate establishment of projected pro forma sales volumes problematic. While each of the aforementioned three factors has occurred to some degree in each of IAWC's rate cases, the compelling problem facing IAWC in this and future rate cases is the increasing effect of each of these factors as well

as the compounding of each of these factors. The inevitable result is that IAWC will over or under recover its net authorized revenues, and customers will pay too much or too little fixed cost contribution in their monthly bills. The RAC would eliminate these issues from the rate case and post-rate case years, ensure that IAWC recovers its revenue requirement, no more and no less, and ensure that customers pay the correct amount of fixed cost contribution in their monthly bills, no more and no less. I discussed each of the aforementioned contributing factors of weather, declining usage patterns and changing number of customers in my rebuttal testimony (IAWC Exhibit 14.00R, pp. 8-14).

Q8. On page 6, line 119, through page 7, line 138, Ms. Harden discusses the effects of declining use per customer on the ratemaking process. Specifically, on page 6, lines 119-131, Ms. Harden argues that you have mischaracterized her testimony when you stated in your rebuttal testimony that she did not contest the declining usage per customer phenomenon of annual declining sales as discussed by Mr. Naumick. Do you agree?

A. No. My characterization of Ms. Harden's testimony that she did not contest the declining annual sales as discussed by Mr. Naumick is accurate. On page 6, lines 129-131, Ms. Harden confirms the accuracy of my characterization when she states: "I, however, do not question the accuracy of the approximate1% decline in annual usage cited by the Company in direct testimony."

Q9. On page 6, line 133, through page 7, line 138, Ms. Harden argues that the decline in annual usage cited by IAWC is "quite small" (l. 136) and does not provide adequate justification for embarking upon the RAC. Do you agree?

A. No. I do not believe a 1% annual decline is "quite small," particularly considering it equates to an approximately 3% decline over the two to three-year period over which rates are expected to be in effect. Moreover, the justification for the RAC is not based solely on the declining usage per customer. As discussed in my rebuttal and surrebuttal testimonies, numerous factors exist that support the need for the RAC. With respect to declining usage patterns, Ms. Harden argues that IAWC did not present any changing or unusual circumstances that that would warrant adoption of the RAC in this proceeding. However, Mr. Naumick's entire testimony discusses the various factors, including mandated and voluntary conservation steps, that reduce IAWC's average usage per customer. Nowhere does Ms. Harden contest the declining usage per customer phenomenon described by Mr. Naumick or deny that it has a growing effect as new and more stringent water efficiency standards are enacted and the saturation of high efficiency appliances increase.

Because a water utility's costs are primarily fixed while its revenues are based to a large extent on sales, reductions in sales typically mean reductions in revenues and, in the case of regulated investor-owned

utilities, reductions in profits as well. Utility managers perceive conservation (whether government-mandated or utility-initiated) and the resulting declining use per customer as a significant threat to revenue stability, as well as a threat to the level and stability of earnings.

Q10. On page 7, line 148, through page 8, line 184, AG Witness Mr. Rubin discusses that the risk that a change in water sales could result in IAWC failing to recover its fixed costs is nothing new for a water utility. Do you agree?

A. While it is true that the risk of failing to recover its fixed costs is nothing new for a water utility, what is new is the degree of risk that water utilities are now experiencing. These issues have admittedly existed for many years, as Mr. Naumick's testimony relates. What is different is the fact that water utilities are experiencing a "perfect storm" for utility revenue shortfalls. "But unlike energy, we have relatively few new uses for water. After US suburbanization and market saturation of lawns and washing machines, per-capita water demand began to stabilize. With the accelerated turnover of inefficient fixtures and appliances pursuant to public policies and utility programmatic efforts, average annual use began to decline."[1] "However, when customers use less water, utilities typically face having to raise water rates to recover lost revenues. Raising rates when less water is sold – because of drought restrictions,

[1] See "The Conservation Conundrum: How Declining Demand Affects Water utilities," Janice A. Beecher, Journal AWWA, February 2010, pp. 78-80.

heavy rains, the economy, or all of these factors provides a 'perfect storm' for utility revenue shortfalls."[2]

Climate, demographic, political and economic shifts have been considerable, yet water rate structures have not significantly changed or adapted, despite the changes in water supply, environmental concerns and requirements, and governmental requirements. The same type of rate structures that predominated in times of little concern for water use are those that utilities still use. Yet there is a wide range of influences and factors on utilities and end users to reduce water demand. The end result is a new world using old water rate methodologies.

Q11. Why is this a problem?

A. Traditional water rate design calls for low fixed fees (Customer Charges) and high volumetric water rates. This traditional rate structure also coincides with the widespread perception of water conservation, which theorizes that the majority of costs, both fixed and variable, should be placed into the variable or volumetric water rate charge. The widespread perception is that the higher the volumetric water rate, the more water customers will conserve in order to lower their water bill.[3] However, placing more costs into the variable or volumetric rate charge exacerbates the problem of potential revenue under-recovery for the

[2] See "Funding Water Conservation," Tom Ash, Journal AWWA, February 2012, pp. 67-73.

[3] The countervailing argument is that such a rate structure presents a distorted price signal because the high volumetric rate implies the avoidance of a high level of costs, which in fact does not occur due to the prevalence of primarily fixed costs.

reasons previously described.

Q12. Do you agree with Ms. Harden's and Mr. Rubin's contention no changes have occurred to precipitate the need for a water rate change such as the RAC?

A. No. Those witnesses have seemingly not recognized the dynamic nature of the water industry because the changes have occurred gradually over time.

Q13. In a publication prepared by Mr. Rubin, he appears to recognize the changing nature and challenges of the water industry and the need for rate design to react to those challenges. Please discuss.

A. In testimony filed before the State of New Hampshire Public Utilities Commission in Pittsfield Aqueduct Company, Inc. rate case DW 10-090, in which he was representing the New Hampshire Office of the Consumer Advocate, Mr. Rubin noted that he had recently prepared a paper for the National Regulatory Research Institute entitled "What Does Water Really Cost? Rate Design Principles for an Era of Supply Shortages, Infrastructure Upgrades, and Enhanced Water Conservation," July 2010. In that document (page 1), Mr. Rubin states:

> Supply shortages, water main breaks, water conservation, and other challenges call for clarity in water rate design. In most jurisdictions, water ratemaking is based on principles and rate designs established many decades ago. Water utilities, regulators, and public advocates rely on two major reference works for designing water rates: the "M1 manual" published by the American Water Works Association (AWWA), and a cost allocation and rate design manual

> jointly published by NRRI and the Water Research Foundation (formerly the American Water Works Association Research Foundation). These two works are 10 and 20 years old, respectively, and were prepared for use by the entire water industry, most of which consists of publicly owned utilities.
>
> This paper will focus on rate design issues for investor-owned water utilities, including the challenges of designing rates during an era of supply shortages, enhanced water conservation, and extensive infrastructure replacement spending. The focus on investor-owned utilities is important for at least three reasons. First, while the two books referred to above continue to provide useful information for utility commissions and practitioners, substantial changes have occurred in the design of water rates since their publication. Second, regulators and expert witnesses fail to apply some of the central teachings of those manuals. Third, important differences exist between rate designs that are reasonable or appropriate for an investor-owned utility and those that are appropriate for a publicly owned utility.

Thus, Mr. Rubin appears to recognize the dynamic nature of the water industry and the need for ever-evolving rate mechanisms to address the issues. Mr. Rubin's own words dispute his rebuttal testimony that there is "nothing new for a water utility."

Q14. On page 10, lines 216-225, of Ms. Harden's rebuttal testimony, she notes that Rider VBA has been approved for only Peoples Gas and North Shore Gas, and according to Ms. Harden, "A need has not been shown to extend a decoupling mechanism to other gas utilities or to other industries within Illinois." Please respond.

A. Ms. Harden's statement is in error. The Commission has also approved decoupling mechanisms in the form of straight-fixed-variable ("SFV") rate design for Nicor and Ameren. SFV rate designs serve the same

purpose as a Rider VBA or a Rider RAC mechanism, simply utilizing a different format. In addition, it should be noted that decoupling mechanisms have been approved for water utilities in New York and California, and for gas utilities in numerous states.[4] Moreover, my previous discussion of the nature of water costs and water revenues clearly illustrates the need for the RAC.

Q15. On page 10, line 227, through page 11, line 236, of her rebuttal testimony, Ms. Harden argues that in the Peoples Gas and North Shore Gas cases, Staff Witness Brightwell's testimony was limited to comparing and contrasting the benefits of Rider VBA to SFV. Do you agree?

A. No. For reasons previously discussed, estimating sales results in pro forma projected volumes which may be higher or lower than actuals. This results in inaccurate cost recoveries for the utility and inaccurate fixed cost contributions by the customers. While I agree that Dr. Brightwell did compare and contrast the benefits of Rider VBA to SFV in the Peoples Gas and North Shore Gas cases, Dr. Brightwell also noted in Peoples Gas and North Shore Gas Company's ("collectively, Peoples Gas") Rider VBA[5] the elimination of these over and under recovery

[4] In Indiana, decoupling mechanisms similar to Rider VBA have been approved for approximately eleven gas utilities. In Ohio, most gas utilities have received approval to use SFV rate designs. Between one-third and one-half of all states now have at least one utility with a decoupling mechanism in place.

[5] Rider VBA refers to the Volume Balancing Adjustment, a decoupling mechanism proposed by Peoples Gas Light and Coke Company and North Shore Gas Company, which is similar in operation to RAC proposed by IAWC.

problems to be one of the significant benefits of decoupling. Moreover, in approving Rider VBA on a permanent basis, the Commission quoted Dr. Brightwell extensively in its January 10, 2012 Order in Peoples Gas Light and Coke Company and North Shore Gas Company (Docket Nos. 11-0280 and 11-0281 Consolidated):

> As Staff witness Dr. Brightwell indicated in his testimony, Rider VBA reduces the reliance on forecasting customers and usage to set rates. Staff Exhibit 6.0, pp. 4-5. The forecasts are inevitably incorrect each year, and they are only correct on average. Thus, Rider VBA prevents harm to either the ratepayer or the utility from usage that deviates from the average. It also protects ratepayers in the event the utilities generate or choose a forecast that underestimates sales volumes. Id., at 9. Absent Rider VBA, such a forecast set rates too high and unjustifiably increases revenues and profits to the Utilities. Id. With Rider VBA, such a forecast is ineffective at increasing profits, because over collections are refunded to customers. (Order at p.163).
>
> Another advantage of Rider VBA as pointed out by Dr. Brightwell is that it diminishes the advantage that the utility has from choosing the timing of its next rate case. Id., at 5. He maintains that without Rider VBA, a forecast that does not account for sales growth leads to over collections. Under this scenario the Utilities have no incentive to petition for a change in rates because such a petition reduces their profits. However, a forecast over-estimating growth in sales causes the Utilities to under collect, and those Utilities have an incentive to file for an increase in rates. Since most rate cases are filed by the Utilities, this asymmetry is to the Utilities advantage and the ratepayer's (sic). (Order at p. 163).
>
> To be clear, our original approval of Rider VBA as a pilot program[6] was not solely centered on energy efficiency factors, nor was energy efficiency the only reason we approved such a decoupling mechanism. Indeed, our rationale then and now is appropriately multi-faced to address the many components that such a mechanism seeks to resolve. For example, weather affects customer usage and decoupling means that customers do not overpay when weather is colder than normal or underpay when weather is warmer than normal. Decoupling also addresses

[6] Docket Nos. 07-0241 and 07-242 Consolidated.

> load changes, including declining load attributable to energy efficiency. Whether Rider VBA prompts the Companies to spend more on energy efficiency is immaterial. The Companies' forecast showed declining load on their systems… Decoupling will take the effects of efficiency into account together with other factors, notably weather, that affects load and promote distribute rate stability for customers and the Companies. (Order at pp. 163-164).
>
> The Commission also agrees with Staff and the Companies that Rider VBA stabilizes the Companies' revenues and ensures that the S.C. Nos. 1 and 2 customers neither over- nor under-pay the approved revenue requirements. (Order at p. 164).

III. INTEREST RATE FOR RIDER RAC DEFERRALS (RESPONSE TO STAFF WITNESS MS. FREETLY)

Q16. On page 17, line 312, through page 18, line 340, Staff Witness Ms. Freetly discusses the appropriate interest rate to be applied to deferrals to be refunded or surcharged above or below the five percent limit. What interest rate does Ms. Freetly recommend for this purpose?

A. On page 18, lines 335-337, Ms. Freetly recommends applying the customer deposit rate to under-recoveries and over-recoveries (i.e., refunds) in excess of the ±5% cap associated with the formula rate.

Q17. What is Ms. Freetly's rationale for using the customer deposit rate?

A. On page 17, lines 321-322, Ms. Freetly states that under-recovered amounts are essentially a loan from the Company to customers and, therefore, should reflect the credit risk of the customers.

Q18. Do you agree with her rationale or recommendation?

A. No. The customer deposit rate does not reflect the cost of capital to

IAWC from funding the shortfall. The AFUDC rate is the most appropriate rate because when the Company experiences a revenue shortfall due to the factors described in Exhibit 14.00R, the Company must obtain capital from a combination of sources of capital (debt, equity, and internally generated funds). The most appropriate measure of the current cost of this capital is the AFUDC rate.

It should be noted that the rate for deferral of interest is symmetrical. That is, when the Company experiences a revenue overage due to the same factors as referenced above, customers would receive the benefit of interest at the same rate as the Company.

IV. EFFECT OF RAC ON COST CONTROL INCENTIVE (RESPONSE TO STAFF WITNESS MS. HARDEN)

Q19. On page 5, line 95, through page 6, line 117, of her direct testimony, Ms. Harden argues that the RAC reduces IAWC's financial incentive to control costs. Did Ms. Harden present the same arguments in her rebuttal testimony?

A. Yes. In her rebuttal testimony, Ms. Harden has presented no new arguments on the RAC's effect on IAWC's financial incentive to control costs.

Q20. On what basis do you believe that the RAC has no effect on IAWC's financial incentive to control costs?

A. As explained in my rebuttal testimony (IAWC Exhibit 14.00R, p.p. 19-20), because the RAC affects only revenues, IAWC remains at risk for

any changes in fixed costs or any changes in unit production costs. The proposed RAC does not guarantee that IAWC will achieve the financial performance approved by this Commission, so management still must actively manage each of the cost elements that comprise IAWC's total cost of service. To the extent that IAWC can reduce its fixed costs between rate cases, this will have a beneficial effect on IAWC and ultimately on its customers. IAWC maintains the incentive to control (and reduce) costs. Therefore, Ms. Harden's argument remains without merit.

V. REQUIREMENT TO CONDUCT AN INTERNAL AUDIT (RESPONSE TO STAFF WITNESS MS. HATHHORN)

Q21. Beginning on page 14, line 320, through page 16, line 363 of her rebuttal testimony, Ms. Hathhorn recommends that IAWC should be ordered to annually conduct an internal audit of the RAC. What is the basis of Ms. Hathhorn's continued proposal to require an audit?

A. Mr. Hathhorn states that IAWC's opposition to an audit is inconsistent with the various automatic fully tracking cost recovery or revenue balancing mechanisms in operation in Illinois that require annual internal audits.

Q22. On page 14, lines 325-328, of her rebuttal testimony, Ms. Hathhorn quotes from your rebuttal testimony, IAWC Exhibit 14.00R. What is the quoted language?

A. The quoted language is as follows:

In IAWC's opinion, all of the audit objectives contemplated by Ms. Hathhorn's recommended language (i.e., ensuring the accuracy of the Reconciliation Adjustment) should be accomplished within the framework of the annual filing and accompanying due diligence.

Q23. Does Ms. Hathhorn identify or explain any audit objectives that would not already be accomplished within the framework of the annual filing and accompanying due diligence.

A. No. Ms. Hathhorn does not identify or explain any audit objectives that would not already be accomplished within the framework of the annual filing and accompanying due diligence. Before the Commission should consider ordering IAWC to perform such an audit, Staff should at least be required to explain why such an audit meets objectives not already accomplished within the framework of the annual filing. Staff has not done so. Therefore, IAWC believes such an additional audit requirement is not necessary and would only add to IAWC's annual O&M expenses.

VI. EFFECT OF RAC ON VOLUNTARY CONSERVATION (RESPONSE TO STAFF WITNESS MS. HARDEN)

Q24. On page 4 of her rebuttal testimony, Ms. Harden argues that revenue decoupling via the RAC would create a disincentive for voluntary water conservation efforts on the part of customers by imposing rate surcharges on them when their consumption levels decline between rate cases. Do you agree?

A. I disagree with Ms. Harden's conclusion. In my view, the failure of

traditional regulation creates this situation – and not the RAC. It is the use of volumetric rate design to recover fixed costs that sends a misleading price signal to customers. The implication of including utility costs in volumetric rates is that the utility can reduce those costs if customers reduce usage. That is not the case, however, because nearly all of the utility's costs are fixed and are not reduced when sales volumes decline.

The RAC will send more accurate price signals to IAWC's customers compared to the traditional ratemaking method because it will stabilize the portion of a customer's bill related to the recovery of fixed costs, while still recovering the variable production costs on a volumetric basis. While the price signals that customers currently receive under a predominantly volumetric rate design will change as a result of implementation of the RAC, the fact is that the price signals under the RAC will be more accurate than a volumetric rate design.

Q25. Page 4, lines 82-88, of Ms. Harden's testimony states that: "The implementation of the RAC will not allow customers to see a benefit of a lower water bill if they conserve water. The steps toward conservation that may be taken by a customer will not provide a benefit to their budget if they cannot realize a price benefit from the conservation. The RAC should not be implemented as it would force the customer to pay more for reduced usage that results from their conservation efforts to help the environment or better manage their

bills." Do you agree with Ms. Harden's statement?

A. No. It should be recognized that even if customers use less water, because the utility's costs are fixed in the short term and the revenues are predominantly volumetric, it is still necessary for customers to pay for the fixed costs. While it is true that customers would pay more under the RAC where they pay the appropriate amount of fixed costs than if they avoided paying for the fixed costs under a traditional volumetric rate design, under the RAC they are, in fact, paying the correct amount of fixed costs. Finally, significant environmental benefits will accrue to customers. As IAWC Witness Mr. Naumick states in IAWC Exhibit 8.00, page 11, lines 224-233:

> Reduced usage helps maintain source water supplies. Diversions from supply sources are lessened, leaving more water for passing flows, environmental benefit, or drought reserve. Reductions in power consumption, chemical usage, and waste disposal not only reduce water utility operating costs but also provide environmental benefits such as reduced carbon footprint and waste streams. Furthermore, reduced water usage by residential and commercial customers also reduces energy consumption within the customer's home or business, for instance, through lower hot water heating needs.

Therefore, I believe the view that that customers should not engage in conservation if they won't enjoy a financial windfall is too narrow.

VII. FIXED VERSUS VARIABLE COSTS AND MARGINAL COST PRICING (RESPONSE TO ICC STAFF WITNESS MS. HARDEN AND AG WITNESS MR. RUBIN)

Q26. On page 4, lines 74-80 of her rebuttal testimony, Ms. Harden argues that in the long run, all costs have the potential to change. Please respond.

A. I agree that in the very long run, all costs could be considered variable costs. However, that fact is completely irrelevant with respect to the need for decoupling mechanisms whose purpose is to ensure the appropriate recovery of short run fixed costs over the time frame rates would be in effect. Mr. Harden's argument is simply perplexing. In decoupling mechanisms, the focus is clearly on the short run. The issue is squarely on the problem resulting from the fact that as sales volumes decrease (in the short run), the (short term) fixed costs are not avoided.

Q27. If Ms. Harden truly believed that all costs were variable, then would it have been logical or consistent for her to agree to the deduction of only short run production costs in the calculation of the RAC?

A. No. Ms. Harden's arguments are inconsistent in this regard.

Q28. On page 1, line 19, through page 7, line 147, of his rebuttal testimony, AG witness Mr. Rubin argues that your definition of fixed costs and variable costs is incorrect because the focus of your definition is on short-term costs. Do you agree?

A. No. As I stated in response to Ms. Harden's rebuttal testimony, long run costs are completely irrelevant with respect to the need for decoupling.

Q29. What are your definitions of fixed costs and variable costs to which Mr. Rubin objects?

A. As Mr. Rubin quoted on page 2, lines 22-24 of his rebuttal testimony, my definition of fixed and variable costs was as follows: "Fixed costs are costs that do not vary with the amount of water consumed. Variable costs are costs that in the short term vary with the amount of water consumed."

Q30. Does Mr. Rubin agree with this definition?

A. No. On page 2, line 27-28 of his rebuttal testimony, Mr. Rubin states: "Mr. Heid's definitions of 'fixed' and 'variable' costs should have no basis in determining utility rates."

Q31. Do you agree with Mr. Rubin's conclusion with respect to your definition of fixed and variable costs?

A. Absolutely not. In fully embedded cost allocation, all costs are classified as either customer-related (a fixed cost), demand or capacity-related (a fixed cost), or volume or variable-related. Indeed, the Commission's approval of straight-fixed-variable ("SFV") rate design is founded upon these cost classifications.

Q32. Is the cost of service study prepared by IAWC witness Paul Herbert founded upon these same cost classifications?

A. Yes. Mr. Herbert used the base-extra capacity cost allocation methodology. Under the base-extra capacity method, IAWC's costs (i.e.

revenue requirements) are allocated to the following cost functions according to the design and operation of the water system: base, extra capacity, customer, and direct public fire protection costs. The functionalized costs are then allocated to each customer class according to their usage and demand characteristics and other factors which establish the cost responsibility of each customer class. **Base Costs** are those costs that vary directly with the total quantity of water used (i.e. variable costs), as well as those capacity costs (fixed costs) associated with serving customers under average load conditions. **Extra Capacity Costs** include operating costs incurred due to demands in excess of average load conditions, and capital costs for additional plant and system capacity beyond that required for the average rate of use (both of which are fixed costs). Maximum day extra capacity costs are incurred in meeting demands in excess of average day requirements. Maximum hour extra capacity costs are incurred in meeting hourly demands in excess of maximum day demands. **Customer Costs** are defined as costs that tend to vary in proportion to the number of customers connected to the system and are, as such, fixed costs. **Direct Public Fire Protection Costs** include the direct costs for maintaining and flushing public fire hydrants and the capital costs associated with those hydrants. Those costs are fixed, as well.

Q33. Did Mr. Rubin object to the base-extra capacity methodology employed by Mr. Herbert, which is founded upon the fixed and variable cost definitions as you described them?

A. No. In fact, Mr. Rubin has utilized and supported the base-extra capacity methodology himself. In testimony filed before the State of New Hampshire Public Utilities Commission in Pittsfield Aqueduct Company, Inc. rate case DW 10-090, in which he was representing the New Hampshire Office of the Consumer Advocate, Mr. Rubin noted that he had recently prepared for the National Regulatory Research Institute the paper I discussed above entitled "What Does Water Really Cost? Rate Design Principles for an Era of Supply Shortages, Infrastructure Upgrades, and Enhanced Water Conservation," July 2010. On page 6, Mr. Rubin states:

> Most cost-of-service studies for water utilities are prepared using the base-extra capacity method ("BECM) described in the AWWA manual.

> Moreover, in Mr. Rubin's exhibits in that case, he applied the base-extra capacity method in recommending an alternate cost of service study on behalf of his clients.

Q34. Isn't your definition of fixed costs and variable costs the primary source or basis for the regulatory or financial bias against conservation for which utilities are proposing Rider RACs, Rider VBAs (in the case of Peoples Gas and North Shore Gas), or SFV rate designs (in the case of Nicor and Ameren)?

A. Yes. The water utility's business consists predominantly of fixed costs that do not vary with usage.

Q35. Did the Commission itself make this same finding?

A. Yes. In the consolidated 2007 Peoples Gas/North Shore Gas case (consolidated Docket 07-0241/07-0242) in which Peoples and North Shore were first seeking approval of Rider VBA, the Commission's Order stated:

> A very large percentage of the Utilities costs are fixed. Even with the Utilities' proposed rate designs, they assert, a significant portion of fixed costs will be recovered through volumetric distribution charges. Rider VBA, the Utilities explain, is a rate mechanism designed to provide the Utilities with a measure of assurance of recovery of the portion of the revenue requirement approved by the Commission in these proceedings that is to be recovered through those volumetric charges. (Order, p. 126.)

Q36. What is your conclusion, then, with respect to Mr. Rubin's statement on page 2, lines 27-28 of his rebuttal testimony, that: "Mr. Heid's definitions of 'fixed' and 'variable' should have no basis in determining utility rates"?

A. Mr. Rubin's statement is simply inexplicable. It has no basis, is inconsistent with all authoritative sources, and is inconsistent with Mr. Rubin's own testimony and papers.

Q37. Please respond to Mr. Rubin's discussion that utility rates should be based on long-run marginal costs.

A. Again, Mr. Rubin's testimony is perplexing. In an attack on the RAC, Mr. Rubin argues that utility rates should be based on long-run marginal

costs. Inexplicably, though, Mr. Rubin does not make the same argument in response to IAWC witness Mr. Herbert's testimony concerning the cost of service study and rate design.

Q38. Please explain why you do not agree with Mr. Rubin's opinion that rates should be based on long run marginal costs.

A. In this instance I disagree with Mr. Rubin on the basis that long run marginal costs are completely irrelevant for purposes of the RAC. However, for purposes of pricing basic utility rates and charges, the theoretical concept of marginal costing (where marginal revenues are set equal to marginal costs) is well accepted as an economically efficient costing method on which to base prices. On the other hand, it has practical problems that have limited widespread use in utility ratemaking.

There are two problems that surface when using marginal costs. One is the interpretation and definition of marginal costs. Different practitioners could evaluate the same utility and come up with completely different conclusions about the marginal costs. The science of marginal cost of service studies is simply not as well evolved as conventional fully embedded cost of service studies. Nor is the issue as well-settled as Mr. Rubin represents concerning whether short run marginal costs or long run marginal costs are most appropriate. The second problem is one of application. Marginal costs, if used for pricing consumption of all customers, will generate either more or less revenue for the utility than

the regulators would authorize. A number of solutions have been suggested for getting around this problem by adjusting the marginal prices, but as soon as one attempts to sidestep this issue, the benefit of optimal resource allocation is lost. In other words, once you don't price consumption at the margin, you will no longer obtain the same benefits of optimal resource allocation you had hoped for from using marginal costs.

Moreover, I am unaware of any instance in which the Commission has established a utility's cost of service study or rates on the basis of long-run marginal costs. That makes sense. Regardless of long-run marginal costs, the utility must still recover an embedded revenue requirement. Failure to allow the utility to do so would impair its financial viability and its entitlement to earn a fair return.

Q39. Does this conclude your surrebuttal testimony?

A. Yes.